

ABSTRACT

This invention relates to a method and apparatus for transmitting a downlink signal from a communication station to one or more subscriber units to achieve a desired radiation level over a desired sector (*e.g.*, everywhere), the communication station including an array of antenna elements and one or more signal processors programmed (in the case of programmable signal processors) to weight the downlink signal according to one of a sequence of complex valued weight vectors. The method includes sequentially repeating transmitting the downlink signal, each repetition with a different weight vector from the sequence until all weight vectors in the sequence have been transmitted with. The sequence is designed for achieving the desired radiation level during at least one of the repetitions. In this way, every user in the desired region is transmitted to in the time period.

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